

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William L. Brooks on 5-17-2007.

| Page of Remarks | Regarding Claim | Line of claim | Change |
|-----------------|-----------------|---------------|---|
| 2 | 1 | 2 | demultiplexer for dividing <u>configured to divide</u> |
| 2 | 1 | 3 | input paths for inputting <u>configured to input</u> |
| 2 | 1 | 7 | and amplifying <u>configured to amplify</u> |
| 2 | 1 | 8 | multiplexer for coupling <u>configured to couple</u> |
| 2 | 1 | 10 | splitter for dividing <u>configured to divide</u> |

Election/Restrictions

2. Applicant's election without traverse of species A in the reply filed on 11-7-2007 is acknowledged.

3. Claims 8-12, 14, 16-17, 19, 21, 23, 25, 27 and 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11-7-2007.

4. This application is in condition for allowance except for the presence of claims 8-12, 14, 16-19, 21, 23-25, 27 and 28 directed to a species non-elected without traverse. Accordingly, claims 8-12, 14, 16-19, 21, 23-25, 27 and 28 been cancelled.

Allowable Subject Matter

5. Claims 1, 3-7, 13, 15, 18, 20, 22, 24 and 26 are allowed.
6. Regarding claim 1, the prior art does not teach or make obvious the use of
- a single semiconductor optical amplifier having two separate input paths configured to input said two components of light outputted from said demultiplexer, each of said input paths of said semiconductor optical amplifier including an active layer that has one type of structure selected from a group composed of a quantum dot, a quantum wire, a quantum dash, and a quantum well, and configured to amplify both of said components of a light outputted from said demultiplexer; and
 - wherein said demultiplexer is a polarization beam splitter for dividing the inputted light into two components that are orthogonal to each other
- within the context of claim 1 taken as a whole.

Conclusion

7. The prior art which is cited but not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ari M. Diacou whose telephone number is (571) 272-5591. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/AMD/
16-Jan-08
/Deandra M Hughes/
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